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Piot et al. (43) **Pub. Date: Feb. 27, 2003**(54) **ROLLER WITH TACTILE FEEDBACK****Publication Classification**(75) Inventors: **Julien Piot**, Rolle (CH); **Laurent Plancherel**, Lausanne (CH); **Florian M. Kehlstadt**, Aclens (CH); **Marc A. Bidiville**, Monaco (MC); **Antoine Merminod**, Gimel (CH); **Baptiste Merminod**, Vevey (CH)(51) **Int. Cl.<sup>7</sup>** ..... **G09G 5/00**  
(52) **U.S. Cl.** ..... **345/156**(57) **ABSTRACT**

A roller on a mouse or other input device imparts a resistance effect to a user with low power. The invention uses an autoblocking mechanism, such as a brake, which derives the force from the force of the user's finger pushing against the autoblocking mechanism. In one embodiment, a braking mechanism using two small rollers biased against the bigger roller or wheel is used. As the user applies a turning force to the wheel, it wedges against one of the two small rollers, depending on the direction, providing the feeling of resistance to the user as the wheel is turned. In another embodiment of the invention, local feedback is provided on a ratchet-type effect. In another embodiment of the invention, feedback is provided through the roller even when the cause of the feedback is something other than the roller.

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